

Appl. No. 10/730,475
Corrected Amdt. dated November 30, 2005
Reply to Office action of September 7, 2005

1007-0580

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Previously presented): An oven door lock mechanism for use with an oven having a door and a frame configured so that the door is adjacent the frame when the door is closed, the lock mechanism comprising:

a latch supported above and coupled to the frame to rotate about a pivot axis and rotatable between an unlatched and latched position, the latch including a follower surface offset from the pivot axis, a blockable arm having a blocked member offset from the pivot axis, and a latching member extending beyond the frame for interacting with the door;

an actuator pin movably supported by the frame, the actuator pin having an outer end extending beyond the frame for engaging the oven door upon closure and a cam end engaging the follower surface of the latch for rotating the latch into the latched position wherein the door is adapted to be captured by the latch;

a motor driving a shaft when actuated;

a cam having three lobes and each two lobes defining a void therebetween, the cam being mounted to the shaft for rotation thereabout and the blockable member being disposed at least partially between a void between two lobes of the cam when the latch is in the unlatched position, the cam being rotatable between a non-blocked position

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wherein rotation of the latch is not inhibited by the cam and a blocked position wherein the cam blocks movement of the latch from the latched position to the unlatched position and wherein movement of the cam between the non-blocked position and the blocked position is accomplished by rotation of the cam by about 60 degrees;

a cam actuated switch, rotation of the cam between the non-blocked position and the blocked position resulting in actuation of the cam actuated switch; and

a switch controlling a motor driving circuit and movement of the latch between the unlatched and latched positions induces a change in the state of the switch from a state in which the motor driver circuit is disabled to a state in which the motor driver circuit is enabled.

Claims 2-7 (canceled)

Claim 8 (previously presented): An oven door lock mechanism for use with an oven having a door and a frame configured so that the door is adjacent the frame when the door is closed, the lock mechanism comprising:

a latch supported above and coupled to the frame to rotate about a pivot axis and rotatable between an unlatched and latched position, the latch including a follower surface offset from the pivot axis and a latching member extending beyond the frame for interacting with the door;

an actuator pin movably supported by the frame, the actuator pin having an outer end extending beyond the frame for engaging the oven door upon closure and a cam end engaging the follower surface of the latch for rotating the latch into the latched position.

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wherein the door is adapted to be captured by the latch;
a motor driving a shaft when actuated;
a cam being mounted to the shaft for rotation thereabout, the cam being rotatable between a non-blocked position wherein rotation of the latch is not inhibited by the cam and a blocked position wherein the cam blocks movement of the latch from the latched position to the unlatched position and wherein movement of the cam between the non-blocked position and the blocked position is accomplished by rotation of the cam by about 60 degrees; and
a lever mounted for rotation about a second pivot axis relative to the oven and a link coupling the latch to the lever and wherein the cam blocks rotation of the lever when in the blocked position.

Claim 9 (previously presented): The device of claim 8 wherein movement of the latch between the unlatched and latched positions induces movement of the lever which engages and disengages a switch for controlling a motor driver circuit to induce a change in state of the switch from a state in which the motor driver circuit is disabled to a state in which the motor driver circuit is enabled.

Claim 10 (original): The device of claim 9 wherein the latch is mounted adjacent the front of the oven and the lever and switch are mounted adjacent the rear of the oven.

Claims 11-20 (canceled)

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Claim 21 (Previously presented) An oven door lock mechanism for use with an oven having a door and a frame configured so that the door is adjacent the frame when the door is closed, the lock mechanism comprising:

a latch having a body supported above and coupled to the frame to pivot about a pivot axis extending through the body and pivotable between an unlatched and latched position, the body of the latch including a follower surface offset from the pivot axis, a blockable arm having a blocked member offset from the pivot axis, and a latching member extending beyond the frame for interacting with the door;

an actuator pin movably supported by the frame, the actuator pin having an outer end extending beyond the frame for engaging the oven door upon closure and being moved thereby and a cam end engaging the follower surface of the latch upon movement of the actuator pin and urging the latch to pivot into the latched position wherein the door is adapted to be captured by the latch;

a motor driving a shaft when actuated; and

a cam being mounted to the shaft for rotation thereabout and the blockable member of the latch is disposed at least partially within a void between two lobes of the cam when the latch is in the unlatched position, the cam being rotatable between a non-blocked position wherein rotation of the latch is not inhibited by the cam and a blocked position wherein the cam blocks movement of the latch from the latched position to the unlatched position.

Claims 22-23 (canceled).

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Claim 24 (currently amended) An oven door lock mechanism for use with an oven having a door and a frame configured so that the door is adjacent the frame when the door is closed, the lock mechanism comprising:

a latch having a body supported above and coupled to the frame to pivot about a pivot axis extending through the body and pivotable between an unlatched and latched position, the body of the latch including a latching member extending beyond the frame for interacting with the door;

an actuator pin movably supported by the frame, the actuator pin having an outer end extending beyond the frame for engaging the oven door upon closure and being moved thereby and a cam end engaging the follower surface of the latch upon movement of the actuator pin and urging the latch to pivot into the latched position wherein the door is adapted to be captured by the latch;

a motor driving a shaft when actuated;

a cam being mounted to the shaft for rotation thereabout, the cam being rotatable between a non-blocked position and a blocked position;

The device of claim 21 further comprising a lever mounted for rotation about a second pivot axis relative to the oven and a link coupling the latch to the lever, one end of the lever being disposed at least partially within a void between two lobes of the cam when the latch is in the unlatched position and wherein the cam blocks rotation of the one end of the lever when the cam is rotated to [[in]] the blocked position so that movement of the latch from the latched position to the unlatched position is blocked.

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Claim 25 (previously presented) The device of claim 24 further comprising a switch controlling a motor driver circuit and wherein movement of the latch between the unlatched and latched positions induces a change in state of the switch from a state in which the motor driver circuit is disabled to a state in which the motor driver circuit is enabled.

Claim 26 (Previously presented) An oven door lock mechanism for use with an oven having a door and a frame configured so that the door is adjacent the frame when the door is closed, the lock mechanism comprising:

a latch having a body supported above and coupled to the frame to pivot about a pivot axis extending through the body and pivotable between an unlatched and latched position, the body of the latch including a follower surface offset from the pivot axis, a blockable arm having a blocked member offset, and a latching member extending beyond the frame for interacting with the door;

an actuator pin movable upon closure of the oven door, the actuator pin having an cam end engaging the follower surface of the latch upon movement of the actuator pin and urging the latch to pivot into the latched position wherein the door is adapted to be captured by the latch;

a motor driving a shaft when actuated; and

a cam mounted to the shaft for rotation thereabout and the blockable member is disposed at least partially within a void between two lobes of the cam when the latch is in the unlatched position, the cam being rotatable between a non-blocked position wherein rotation of the latch is not inhibited by the cam and a blocked position wherein the cam

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blocks movement of the latch from the latched position to the unlatched position and wherein movement of the cam between the non-blocked position and the blocked position is accomplished by rotation of the cam by about 60 degrees.

Claims 27-28 (canceled).

Claim 29 (currently amended) An oven door lock mechanism for use with an oven having a door and a frame configured so that the door is adjacent the frame when the door is closed, the lock mechanism comprising:

a latch having a body supported above and coupled to the frame to pivot about a pivot axis extending through the body and pivotable between an unlatched and latched position, the body of the latch including a latching member extending beyond the frame for interacting with the door;

an actuator pin movable upon closure of the oven door, the actuator pin having an cam end engaging the follower surface of the latch upon movement of the actuator pin and urging the latch to pivot into the latched position wherein the door is adapted to be captured by the latch;

a motor driving a shaft when actuated; and

a cam mounted to the shaft for rotation thereabout and the blockable member is disposed at least partially within a void between two lobes of the cam when the latch is in the unlatched position, the cam being rotatable between a non-blocked position wherein rotation of the latch is not inhibited by the cam and a blocked position wherein the cam blocks movement of the latch from the latched position to the unlatched position and

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wherein movement of the cam between the non-blocked position and the blocked position is accomplished by rotation of the cam by about 60 degrees;

The device of claim 26 further comprising a lever mounted for rotation about a second pivot axis relative to the oven and a link coupling the latch to the lever, one end of the lever being disposed at least partially within a void between two lobes of the cam when the latch is in the unlatched position and wherein the cam blocks rotation of the one end of the lever when the cam is rotated to [[in]] the blocked position.

Claim 30 (previously presented) The device of claim 29 further comprising a switch controlling a motor driver circuit and wherein movement of the latch between the unlatched and latched positions induces a change in state of the switch from a state in which the motor driver circuit is disabled to a state in which the motor driver circuit is enabled.